



# August 2018 Updates to EPA's Portfolio Manger Metrics

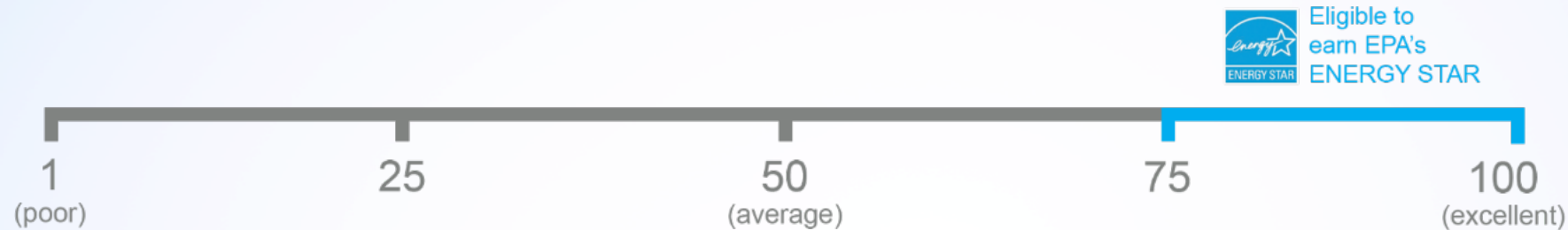
Leslie Cook  
US EPA ENERGY STAR  
August 29, 2018

# Agenda

- Overview of Portfolio Manager Metrics Updates
  - 1-100 ENERGY STAR Scores
  - Other Metrics
  - Common Questions about Metric Changes
- 2018 Certification Updates
  - Status of 2018 Applications Received to-Date
  - Application Deadlines through End-of-year 2018
- Overview of EPA's ENERGY STAR Resources
  - Portfolio Manager User Support
  - Resources to Improve Performance
- Q&A

# 1-100 ENERGY STAR Score Updates

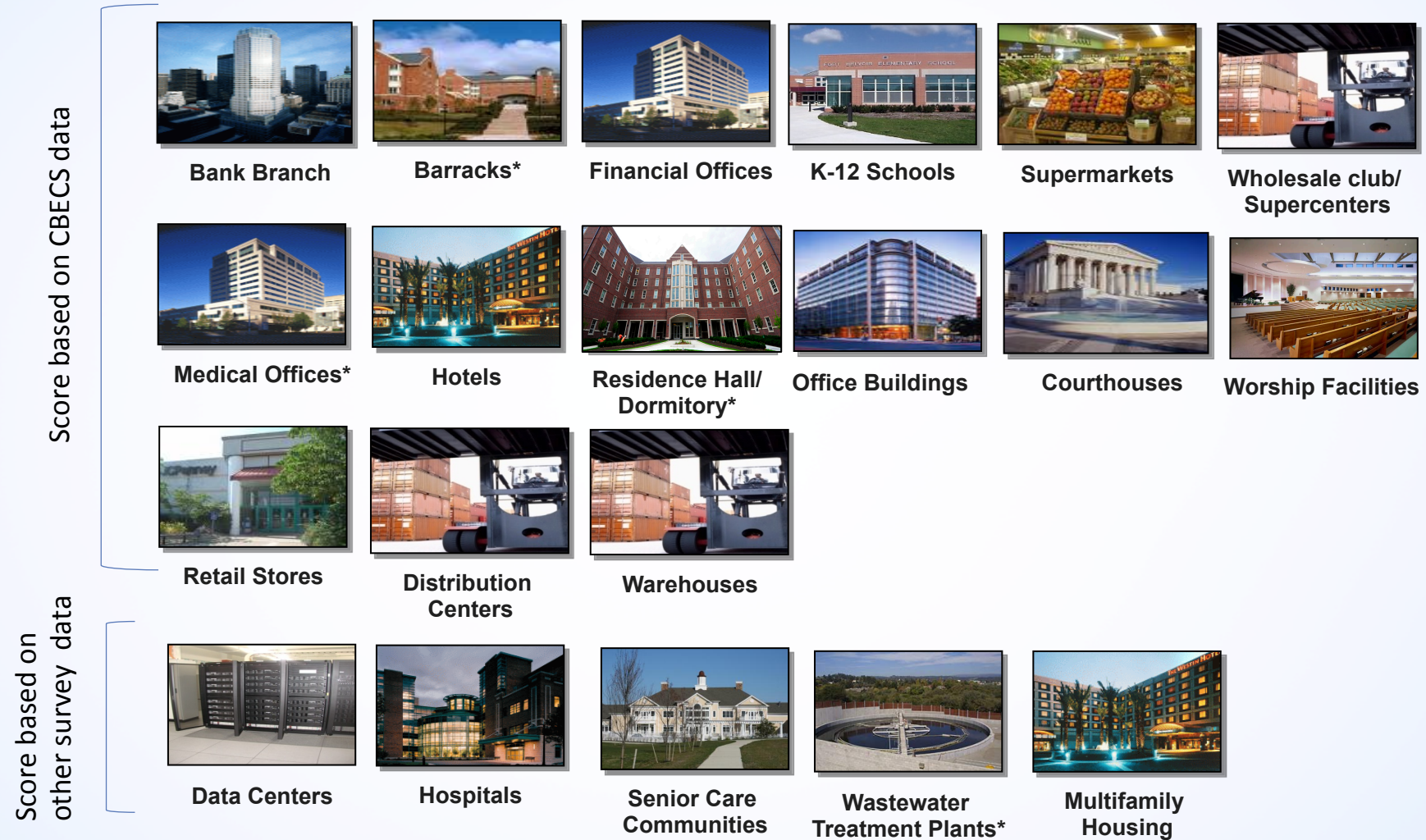
# 1-100 ENERGY STAR score



Primary objectives of the 1-100 ENERGY STAR score remain:

- Compare buildings to the national population of peer buildings
- Evaluate energy performance for a whole property using actual metered energy consumption
- Normalize for building activity, weather and climate
- Offer a simple way to evaluate measured energy use, prioritize investments, and communicate relative performance across a portfolio of buildings

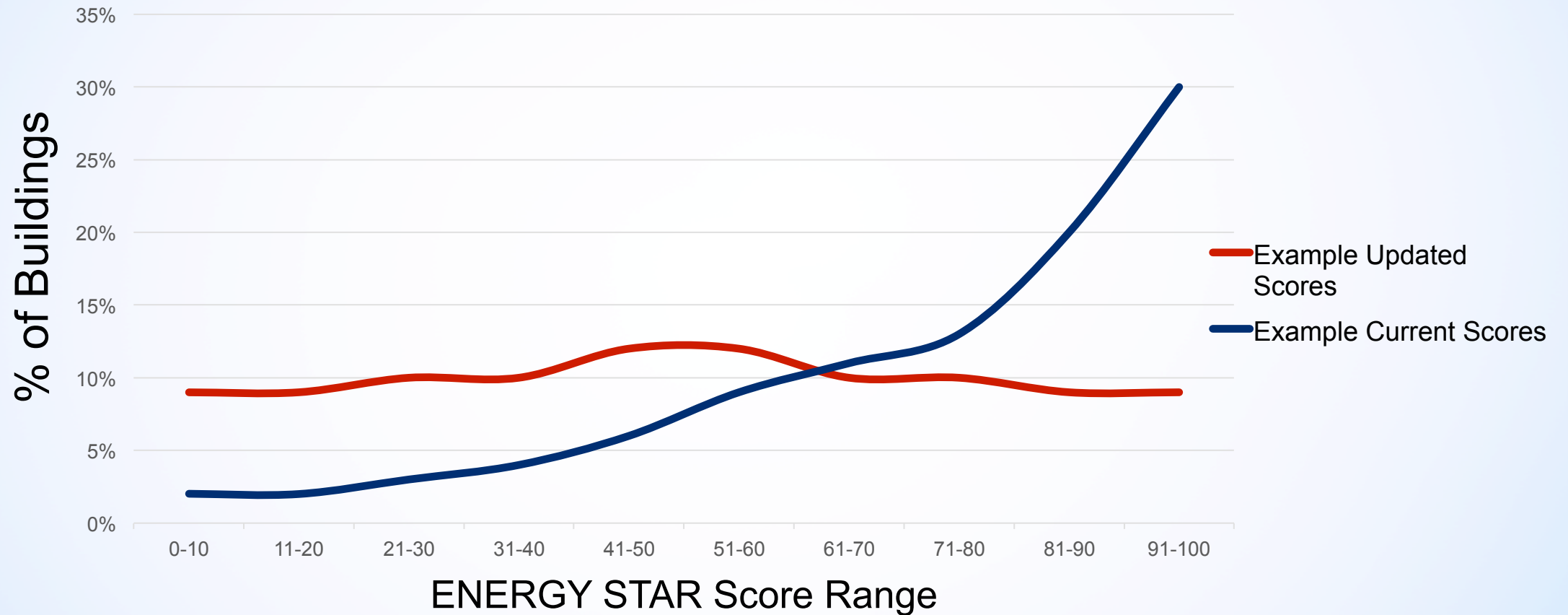
# Property types with 1-100 ENERGY STAR scores



# Objectives of analysis and score update

- Provide information about building performance based on the most up-to-date market data available
  - When updated data sources become available, we refresh the ENERGY STAR score accordingly
  - 2012 Commercial Energy Consumption Survey was released by EIA (scores prior to August 27 were based on 2003 survey)
  - 2012 survey shows lower aggregate energy intensity as compared with 2003
  - If the shows that the market is getting more efficient, then it may become harder to qualify for ENERGY STAR certification
- Re-assess key drivers of energy use
  - Have the relationships between operating characteristics and energy intensity changed in the last 10 years?
  - Are there new variables in CBECS that we should be adjusting for going forward?

# ENERGY STAR scores need to be recalibrated over time



# What got updated?

- 1-100 ENERGY STAR score models (based on CBECS 2012)
  - **Offices**
    - Financial offices
    - Bank branches
    - Courthouses
  - **K-12 Schools**
  - **Retail**
    - Retail store
    - Warehouse club/ supercenter
  - **Supermarkets**
  - **Hotels**
  - **Warehouses**
    - Refrigerated
    - Non-refrigerated
    - Distribution centers
  - **Houses of Worship**

→ *Released on August 26, 2018*

# Use detail updates in Portfolio Manager

- **K-12 Schools:**

- “Number of Workers on Main Shift” is **now required** to calculate the 1-100 score.
  - Previously, this was an optional field that was not required to receive a score, and if left blank, a default value was assumed based on each school’s gross floor area.
- These Use Details are no longer required and will not contribute to the score:
  - Number of Computers
  - Number of Walk-in Refrigerator/Freezer Units

- **Offices**

- Percent that can be Heated is no longer required and will not contribute to the score.

- **Supermarket:**

- “Number of Open or Closed Refrigeration/Freezer Units” is **now required** to calculate the 1-100 score.
  - Previously, this was an optional field that was not required to receive a score, and if left blank, a default value of “0” was assumed.
- Cooking Facilities is no longer required and will not contribute to the score.

# Use detail updates in Portfolio Manager

- **Refrigerated Warehouse:**

- The following Use Details are **now required** to calculate the 1-100 score:
  - [Percent Used for Cold Storage](#). This field was added to all Refrigerated Warehouses and the value was defaulted to 50%.
  - [Percent that can be Cooled](#). This field was added to all Refrigerated Warehouses and the value was defaulted to 0%.
  - [Percent that can be Heated](#). This field was added to all Refrigerated Warehouses and the value was defaulted to 0%.

- **Non-Refrigerated Warehouse & Distribution Center:**

- “[Percent Used for Cold Storage](#)” is **now required** to calculate the 1-100 score.
  - This field was added to all Non-Refrigerated Warehouse & Distribution Center and the value was defaulted to 0%.

# Use detail updates in Portfolio Manager

- **Worship Facilities:**

- The following Use Details are **now required** to calculate the 1-100 score:
  - Gross Floor Area Used for Food Preparation. This field was added to all Worship Facilities and the value was defaulted to 0%.
  - Percent that can be Cooled. This field was added to all Worship Facilities and the value was defaulted to 100%.
  - Percent that can be Heated. This field was added to all Worship Facilities and the value was defaulted to 100%.
- The following Use Details are no longer required and will not contribute to the score:
  - Number of Weekdays Open
  - Number of Computers
  - Cooking Facilities
  - Number of Commercial Refrigeration/Freezer Units

# New buildings size minimum requirements for ENERGY STAR Score

Property Type	Current Score Minimum	Updated Score Minimum
Bank Branches	1,000 ft <sup>2</sup>	1,000 ft <sup>2</sup>
Worship Facilities	1,000 ft <sup>2</sup>	1,000 ft <sup>2</sup>
Offices	5,000 ft <sup>2</sup>	1,000 ft <sup>2</sup>
Schools	5,000 ft <sup>2</sup>	1,000 ft <sup>2</sup>
Warehouses	5,000 ft <sup>2</sup>	1,000 ft <sup>2</sup>
Grocery/Supermarkets	5,000 ft <sup>2</sup>	5,000 ft <sup>2</sup>
Hotels	5,000 ft <sup>2</sup>	5,000 ft <sup>2</sup>
Retail/Wholesale Club	5,000 ft <sup>2</sup>	5,000 ft <sup>2</sup>

# Data center energy estimates

## Two options for properties with data centers

### 1. Existing and recommended option

- Measure and enter IT energy
- Industry best practice – Most accurate and complete measure

### 2. New option: Estimated energy use for data centers

- Designed for smaller data centers, within another property type, and where it is not practical to measure IT Energy
- Estimate capped at 10% of the building area
- Buildings with Data Centers that have previously benchmarked without accounting for the Data Center space can now use this option and will likely see an increase in score.

# Other metric updates

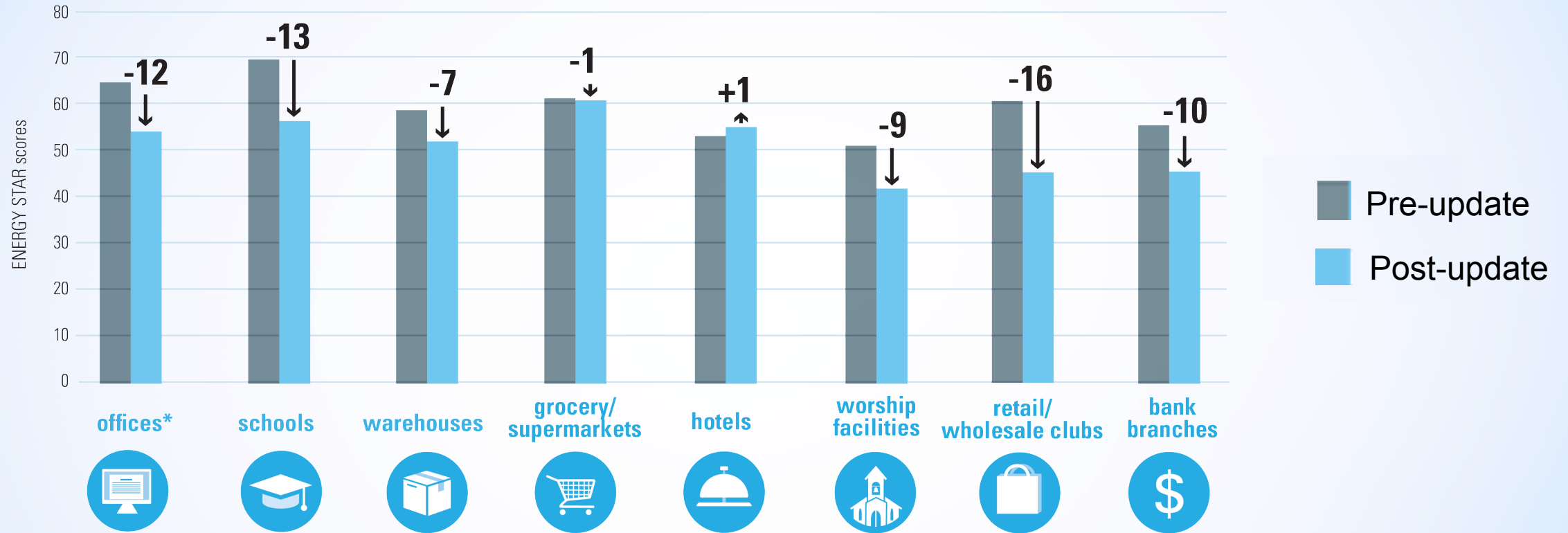
- **New National Electricity Source Factor**

- **Past approach:** Grid electricity generated from renewable energy treated as requiring the same raw fuel inputs as fossil fuel energy.
- **New approach:** Offsite renewables lower the national average electric source factor. Electricity generated from renewable energy sources have lower raw fuel inputs than electricity generated from fossil fuels.
- **Dropping from 3.1 to 2.8**
- Will impact ENERGY STAR score & all source energy metrics - changes based on this update alone will be small in magnitude comparatively
- ENERGY STAR score could increase or decrease depending on a building's fuel-mix ratio

- **Additional factor updates**

- US national site/source medians
  - Average fuel costs
  - GHG emission factors
  - Weather station refresh
- **Monthly total electricity and natural gas** data now available in Portfolio Manager custom reports and data requests

# Average ENERGY STAR score change by space type



\*office, financial office, courthouse

These are average score changes for these building types. An individual building's score change is likely to differ from the average change shown above.

# Common Questions

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## **Why did my building's ENERGY STAR score decrease more than the averages EPA published ahead of the model updates?**

- Before the update, EPA calculated average score changes by building type based on buildings benchmarked in Portfolio Manager, and we published those average changes to give our stakeholders some idea of what to expect.
- These calculations were based on a subset of each building type which were single-use buildings. Mixed-use buildings were not included in the analysis of expected score changes due to the complexity of calculating their expected score changes. Note that the approach to calculating mixed-use buildings has not changed.
- Your buildings may differ from the typical building used in our analysis, including if your building has more than one use.
- The change in your building's ENERGY STAR score will vary from the published average depending on its energy use, fuel mix, business activity, property type, and other variables.
- By definition, roughly half of buildings of any type should have larger decreases than average, and half should have smaller decreases.

# Common Questions

## Why are the average score decreases so large for most building types?

- ENERGY STAR score updates for most building types are intended to happen somewhat gradually (typically every four years) when new data from Department of Energy's [Commercial Building Energy Consumption Survey](#) (CBECS) becomes available.
- EPA had previously used data from the 2003 CBECS survey to calculate scores, and planned to complete a comprehensive score update using data from the 2007 CBECS survey. This update would have occurred in 2013.
- The 2007 CBECS survey was not released by the Department of Energy, making it impossible for EPA to update our scores as planned.
- With the recent update to scores using the 2012 survey data, there is a nine-year gap between available building energy survey data.
- Over this period of time there were significant changes in the US building stock, to which your building is compared, and the relationship between energy use and building operations.

# Common Questions

## Where can I learn more about the 1-100 score and other metric updates in greater technical detail?

- [Technical reference documents](#) detail the reference data analysis and development of the 1 -100 ENERGY STAR score for every property type
- Additional technical references summarize how Portfolio Manager calculates metrics, including Source Energy and Greenhouse Gas emissions. Available in Portfolio Manager or in the [ENERGY STAR Tools and Resources Library](#).



# Common Questions

## How do the new use details impact my score?

- New Use Details are now included in some score models and default values were added.
- Default values are often conservative to avoid overstating scores.
- If your actual value differs from the default values for these newly required Use Details, *updating these fields will increase the accuracy of your scores and may result in increased scores.*
- Instructions on updating Use Detail fields can be found in this [Frequently Asked Question](#).

# Common Questions

**Why did my 1-100 score change even though my property type wasn't included in the 2012 CBECS update? (hospitals, multifamily, etc.)**

- Although the ENERGY STAR models were only changed for a specific subset of properties in the August 2018 update, all property types could experience a change in metrics due to the updated site-to-source conversion factors for several fuel types (we update these annually).
  - **Electricity** site-to-source conversion factor dropped from 3.1 to 2.8, which will impact all properties that use electricity. This update reflects improvements to the electric grid's efficiency.
  - **District chilled water** site-to-source conversion factor dropped from 1.00 to 0.91
- Note: None of the data that you "input" into Portfolio Manager has been changed. This includes: meters, meter entries, property uses, property use details, and basic property information.

# Common Questions

## How did the score updates affect my historical scores?

- All scores, including all historical scores, were updated on August 27, 2018 and pre-update scores are no longer accessible in Portfolio Manager.
- This is done so you can accurately compare your buildings' energy performance over time. If we didn't update historical scores, you would not be comparing "apples to apples" in your metrics from year to year.
- Previous ENERGY STAR certifications will not be affected by these score updates.

# Common Questions

## When will the next score update happen?

- EIA is currently planning CBECS 2018 survey to be collected in Spring 2019
  - Data is expected to be released in 2021-2022
  - Next ENERGY STAR score update for buildings based on CBECS would occur in 2023-2024
- EPA is currently evaluating non-CBECS surveys for hospitals and medical office buildings with the goal of updating those scores in 2019

# Common Questions

## How do I use the new energy estimate option for Data Centers?

- Utilize these new FAQs:
  - [Data Center Energy Estimates: How do I use them?](#)
  - [Data Center Energy Estimates: When can they be used for certification?](#)
  - [Data Center Energy Estimates: How will they be implemented?](#)
- All other Data Center [FAQs](#) (general data center and use detail default definitions, instructions on metering, info on data centers within tenant spaces, etc.)

# 2018 Certification Application Updates

# ENERGY STAR certification: fundamentals unchanged

- The threshold for qualifying for ENERGY STAR certification is still a score of 75 or higher
- All other requirements for verification remain unchanged
- Past ENERGY STAR certification awards will not be rescinded



## Stats on applications received (as of 8/27/18)

- Over 8,000 applications received in 2018
- 7,656 ENERGY STAR Certifications awarded
- Less than 500 applications still under review
- 2,855 Properties certified in 2017 took advantage of the flexibility to apply early in 2018

# 2018 certifications already submitted

- If you submitted your application before 8/26/2018
  - Check your “Recognitions” tab in Portfolio Manager for the status of your application
  - Applications are still being reviewed, and if no issues are found, they will be evaluated using the pre-update metrics
  - If issues are found that require a re-submission, the application will be evaluated using the updated score
  - If you need assistance with an application with the status “questions for applicant” or “revised application required,” email [escertification@energystar.gov](mailto:escertification@energystar.gov) and include the Property Name & ID

# Certification deadlines for the remainder of 2018

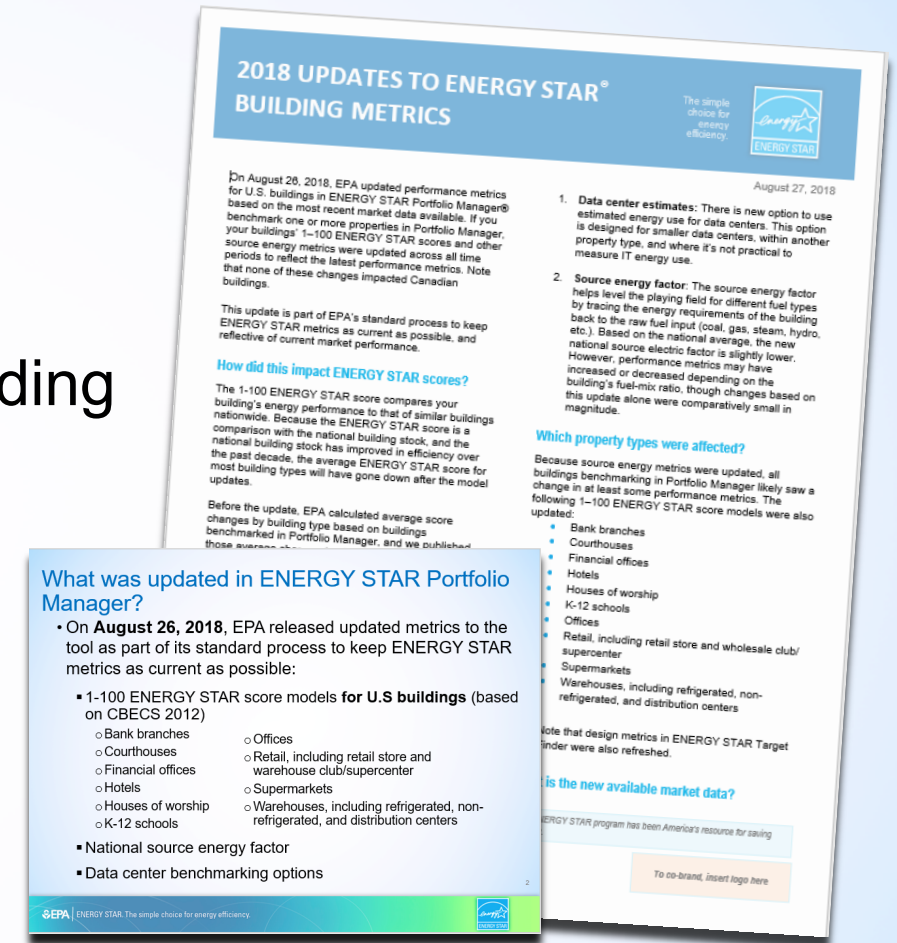
- **Thursday, November 15, 2018 by 11:59 pm EST**
- All applications submitted before this time will be eligible for 2018 certification
- If your application is received after November 15, 2018, it will be put in the queue for 2019 ENERGY STAR certification
- 2019 applications can be submitted after 8/26/18 and will be reviewed in January 2019

# EPA Resources

# 2018 metric update homepage

- Summary of changes
- Links to Frequently Asked Questions
- Updated Technical Reference Guides for each building type's score model
- Link to the Portfolio Manager Help Desk
- Recorded webinars and links for future webinars
- Communications materials
  - ✓ Co-brandable fact sheet
  - ✓ Template PPT deck with speakers notes
  - ✓ Video tutorial about the ENERGY STAR score

[www.energystar.gov/scoreupdates](http://www.energystar.gov/scoreupdates)



# EPA resources to help improve energy performance

- Tap into a variety of tools and resources to improve energy efficiency and increase scores:
  - Guidelines for Energy Management
  - Building Upgrade Manual
  - Cash-Flow Opportunity Calculator
  - ENERGY STAR College Course
  - “Energy Tips for Small Business” Guides
  - ENERGY STAR Action Workbook for Small Business
  - Building Competition Guide, Data Tracker, and Competition Activity Kits

[www.energystar.gov/buildings/tools-and-resources](http://www.energystar.gov/buildings/tools-and-resources)



# Improve performance and raise scores with new “Energy Treasure Hunt” resources

- A cost-effective way for buildings to identify and realize savings from improvements in operations and maintenance.
- Treasure Hunts have been popular among industrial facilities for several years, commonly reducing their energy use by 7 – 15%
- Can last 1-2 days and have 1-2 teams of about 5 people.
- October is “Treasure Hunt Month”
  - EPA will be highlighting partners who conduct Energy Treasure Hunts, share their discoveries, and showcase their success.
  - Start planning now so you can schedule your Treasure Hunts for October



Join EPA’s “Energy Treasure Hunt” webinar on Tuesday, September 11, 1:00 pm EDT.  
Register at <https://esbuildings.webex.com/>

# ENERGY STAR Treasure Hunt Kit



- How-to guide
- Savings calculators
- “Treasure maps” for one-day hunts for:
  - Offices
  - K-12 schools
  - Retail Stores
  - Hospitals
  - Labs

All available now: [www.energystar.gov/TreasureHunt](http://www.energystar.gov/TreasureHunt)

# Questions and Discussion

Learn more at [www.energystar.gov/scoreupdates](http://www.energystar.gov/scoreupdates)